



Laryngeal tuberculosis: A case of a non-healing laryngeal lesion

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CASE REPORT

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Abstract

We report a case of laryngeal tuberculosis in a 47-year-old Korean man. Laryngeal tuberculosis is rare and currently accounts for less than 1% of all cases of tuberculosis. Clinical features of laryngeal tuberculosis include hoarseness, odynophagia and dyspnoea. Macroscopically, laryngeal tuberculosis may mimic laryngeal carcinoma, chronic laryngitis or laryngeal candidiasis. The diagnosis is often delayed due to a low index of clinical suspicion and hence may pose a significant public health risk. Laryngeal tuberculosis should be considered in the differential diagnosis of patients who present with any form of laryngeal lesion.

Key Words

Larynx, Tuberculosis, Diagnosis

Case Report

A previously well 47-year-old Korean man, who had emigrated from Korea to New Zealand eight years ago, presented with a one-month history of throat discomfort especially when swallowing and an unproductive cough. The patient denied any symptom of night sweats, fever or weight loss. At nasendoscopy, there was a 1 cm ulcer on the laryngeal surface of the epiglottis. Biopsy of the ulcer at microlaryngoscopy showed non-specific inflammation. Symptoms persisted at review one month later, and a repeat nasendoscopy showed a thickened, irregular and friable lesion on the epiglottis which was suspicious for malignancy (Figure 1). Repeat biopsy revealed necrotic

granulomatous inflammation, a single acid fast bacillus on Ziehl-Neelsen stain and no evidence of malignancy. A plain chest radiograph showed patchy pulmonary shadowing in the right upper zone consistent with pulmonary tuberculosis (Figure 2). Sputum culture yielded *Mycobacterium tuberculosis*. A standard six-month course of anti-tuberculosis chemotherapy, which included rifampicin 600mg daily and isoniazid 300mg daily, was given. Pyrazinamide 1500mg daily and ethambutol 1200mg daily were discontinued after two months as the isolate was sensitive to all first line antitubercular drugs. Upon review two months after starting treatment, the patient's symptoms had resolved.

Discussion

In the early 20th century, laryngeal tuberculosis was commonly associated with advanced pulmonary tuberculosis. Laryngeal involvement was often the distressing terminal event in up to 84% of fatal cases of pulmonary tuberculosis.¹ In 1924, Sir St. Clair Thompson considered tuberculosis to be the most common disease of the larynx.² The mode of transmission was a direct spread along the airway from a primary lung infection. The lesion often appeared as multiple ulcers involving the posterior part of the larynx due to pooling of secretions in bed ridden patients.³ With the advent of antituberculous medications, the incidence of all forms of tuberculosis including laryngeal tuberculosis has declined through the 20th century in affluent countries. The clinical pattern has also changed over the years. Recent studies have shown that laryngeal tuberculosis is less often associated with active pulmonary tuberculosis. A study by Shin et al. found that only seven out of 22 cases of laryngeal tuberculosis (32%) had concurrently active pulmonary tuberculosis.³ Nine cases (41%) had normal lung status. This result was consistent with another study where only 28 out of 60 cases of laryngeal tuberculosis (47%) had active pulmonary disease.⁴ This finding suggests that the mode of transmission may be due to primary or direct laryngeal seeding of aerosolised bacilli. Alternatively lymphatic or haematogenous spread from another focus is also possible. In our patient, reactivation of latent pulmonary tuberculosis with secondary seeding on the larynx is the likely mode. The true vocal cord is the most commonly involved site followed by the false vocal cord and epiglottis. The visual appearance of

the larynx is variable, and lesions may appear as ulcerative, ulcerofungative, non-specific inflammatory or polypoid.³ Macroscopically, laryngeal tuberculosis may be indistinguishable from laryngeal carcinoma which is at least 40 times more common.⁵ The appearance may also mimic chronic laryngitis or laryngeal candidiasis.⁶

Clinically, patients with laryngeal tuberculosis often present with hoarseness. In a case series by Wang et al., hoarseness was the presenting symptom in 85% of patients.⁵ Constitutional symptoms including night sweats, fever and weight loss are often not the presenting complaint and has even been reported as rare.⁷

Conclusion

Tuberculosis should be considered in the differential diagnosis of patients who present with any form of laryngeal lesion. The non-specific appearance of laryngeal tuberculosis at nasendoscopy as highlighted in our case may lead to a false suspicion of the more common laryngeal carcinoma. Prompt diagnosis is important as delay in diagnosing may pose a significant public health risk. An abnormal plain chest radiograph showing features of pulmonary tuberculosis may facilitate diagnosis but a normal plain chest radiograph is often found in the presence of laryngeal tuberculosis.

Figure 1: Appearance on nasendoscopy. A thickened, irregular and friable lesion is seen on the epiglottis (black arrow).

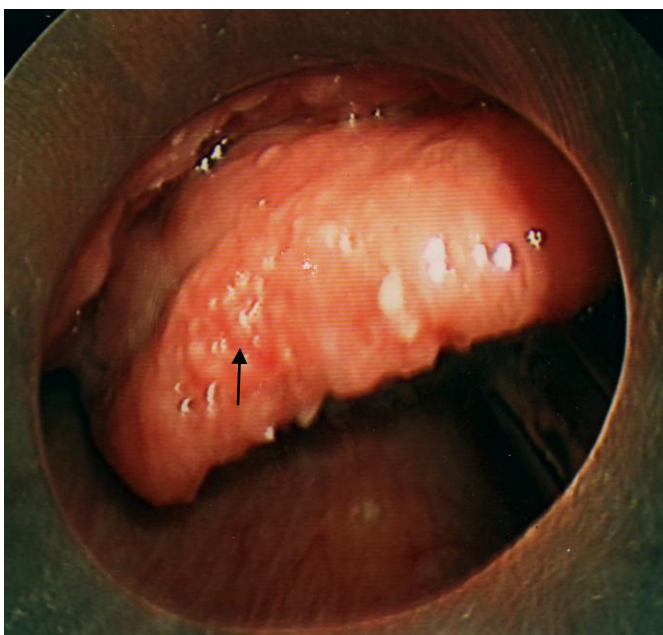
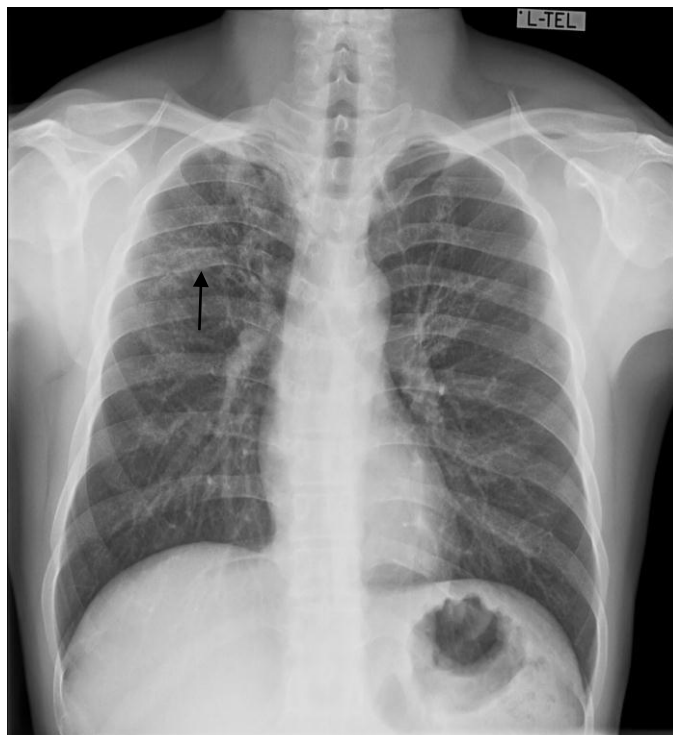


Figure 2: Plain chest radiograph. Patchy infiltrates are evident in the right upper zone (black arrow).



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PEER REVIEW

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CONFLICTS OF INTEREST

The authors declare that they have no competing interests.



PATIENT CONSENT

The authors declare that:

1. They have obtained written, informed consent for the publication of the details relating to the patient in this report.
2. All possible steps have been taken to safeguard the identity of the patient.
3. This submission is compliant with the requirements of local research ethics committees.